

REMARKS

The undersigned thanks Examiner Kackar for the courteous telephone interview on September 18, 2003. The present Amendment is along with the discussion at the interview.

Interview Summary

The undersigned explained that the co-axial arrangement of the plate, the cam mechanism, and the actuator was not taught in the prior art, and Predhome's drive shaft (corresponding to the actuator) was vertical to the cam mechanism. The Examiner agreed. The undersigned explained further differences between the claimed invention and the prior art. No further agreement was reached.

Claim Amendments

Claim 1 has been amended to add further limitations and further clarify the invention. Support can be found at page 5, lines 15-18, and page 8, lines 6-9, and Figures 1(a) and 1(b), for example. Claims 15-21 have been added. No new matter has been added. For example, support for "700-1,300 kg force" recited in Claim 18 can be found at page 1, lines 21 and 27. Applicants respectfully request entry of the amendments and reconsideration of the application in view of the amendments and the following remarks.

Rejection of Claims 1, 7, 12, and 13 Under 35 U.S.C. § 103

Claims 1, 7, 12, and 13 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Adams in view of Predhome Jr and further in view of Hautau. Claim 1 has been amended to incorporate new limitations of a linking cylinder. The claims could not be obvious over the references as discussed below.

Claim 1

Claim 1 as amended herein recites at least: (A) the plate, the cam cylinder, the support cylinder, and the rotary actuator are co-axial, and (B) the linking cylinder encircles the cam cylinder, is fixed around the cam follower, and is connected to the sliding support, wherein the linking cylinder is linked with the support cylinder and moves along the vertical beam when the

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support cylinder moves vertically. According to the above, it is possible to perform load-locking operation securely for long time.

In contrast, the references teach as follows:

Elements	Adams	Predhome Jr.	Hautau
A) Co-axial arrangement	None	None. The cam shaft 28 is <u>perpendicular</u> to the cam cylinder 50 (Fig. 5).	None. The drive 120 is in <u>parallel</u> to the vertical rod 102, but is <u>not</u> co-axial therewith (Fig. 4)
B) Linking cylinder fixed to cam follower	None	None.	None.

In the above, element (A) was discussed at the interview, and the Examiner appeared to agree with the undersigned. Element (B) was not presented at the interview. As shown in the table above, none of the references teaches or even suggests elements (A) and (B). A combination of the references could not lead to Claim 1, and Claim 1 could not be obvious over the references. The remaining claims are dependent on Claim 1, and at least for the reasons above, the remaining claims also could not be obvious over the references.

It is respectfully submitted that the rejection should be withdrawn.

Rejection of Claim 14 Under 35 U.S.C. § 103

Claim 14 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Adams in view of Predhome Jr. and Hautau as applied to Claim 1 and further in view of Takashi Sada. As discussed above, Claim 1 could not be obvious over the references. Takashi is irrelevant to the patentability of Claim 1. Claim 14 is dependent on Claim 1, and at least for the reason, Claim 14 could not be obvious over the above references. It is respectfully submitted that the rejection should be withdrawn.

New Claims 15-21

Claims 15-20 have been added. These claims could not be obvious over the prior art as discussed below.

Claim 15-17

New Claim 15 recites at least elements (A) and (B) discussed above. Thus, as with Claim 1, Claim 15 could not be obvious over the references. Claims 16 and 17 are dependent on Claim 15, and at least for the reason, Claims 16 and 17 could not be obvious over the references. It is respectfully submitted that Claims 15-17 are allowable.

Claim 18-21

New Claim 18 recites at least element (B) discussed above and (C) approximately 700-1,300 kg force can be exerted on the support cylinder and the cam follower via the plate when in use. Element (B) has been discussed above. With regard to element (C), Adams is irrelevant to the cam mechanism, but both Predhome Jr and Hautau disclose a cam mechanism. However, Predhome Jr. discloses an engine valve, and Hautau discloses a substrate pick-up device. One of ordinary skill in the art could not reasonably consider that Predhome Jr.'s or Hautau's mechanism could hold approximately 1,000 kgf, because Predhome Jr.'s cam shaft 28, groove 30, and bushing 46 could possibly support a high load, and Hautau's cam follower 126 and parallel axial configuration could possibly support a high load. Thus, as discussed above, element (B) is not taught or suggested by the references, and in addition, element (C) is also not taught or suggested by the references.

Thus, Claim 18 could not be obvious over the references. Claims 19-21 are dependent on Claim 18, and at least for the reason, Claims 19-21 could not be obvious over the references. Specifically, Claim 20 recites the co-axial arrangement (A), and thus, Claim 20 recites (A), (B), and (C). It is respectfully submitted that Claims 18-21 are allowable.

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CONCLUSION

In light of the Applicants' foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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Dated: September 30, 2003

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